

US EPA ARCHIVE DOCUMENT



## Institutional Controls For Final Remedies

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## Objectives

- To define EPA's expectations for using institutional controls in final RCRA corrective action remedies
- To address common myths about ICs
- To provide an approach to the design, implementation, and maintenance of ICs

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### References:

“Institutional Controls: A Remedial Project Manager’s Guide to Identifying, Evaluating, and Selecting Institutional Controls.” Draft Fact Sheet, October 1999.

“Institutional Controls: A Reference Manual.” USEPA Workgroup on Institutional Controls, Draft, March 1998.

Two main messages of this module are:

1. Institutional controls are generally a component of a remedy that are used to supplement other controls to achieve protection of human health and the environment. They are seldom, if ever, a sole remedy.
2. Institutional controls should be evaluated using the same approaches and criteria as other parts of a remedy.

This module is based on draft EPA institutional control guidance and is not intended to be a legal primer on different controls, nor is it designed to teach which controls are most appropriate given a site-specific situation. Rather, the guidance summarizes key aspects of thinking about ICs from a project manager’s perspective.

## What are Institutional Controls?

- Non-engineering measures, usually legal controls, that minimize the potential for exposure to contamination by limiting land or resource use
- Example types
  - Government controls
  - Proprietary controls
  - Enforcement tools
  - Informational Devices



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Notes:

Please see attached matrix for more information.

Government controls -- Existing or future state or local authorities that restrict property use (traditional police powers). Examples include zoning, laws regarding well drilling or water usage, and legal authorities involving licensing or permitting processes.

Proprietary ICs – Legal instruments placed in the chain of title for the subject real property that convey a property interest from the owner to a second party, for the purpose of imposing restrictions on land and/or water use. Examples include restrictive easements and covenants. These property interests often include the right of access to inspect and monitor the restrictions.

Enforcement tools – Federal, state and local governments can, in some circumstances, direct a property owner (usually a responsible party or “RP”) to refrain from using a property in specific ways. Also, contractual agreements can be reached with property owners either through an enforcement settlement process if owner is a RP or in a separate agreement with non-RPs. Agreements can also be reached between federal, state or local authorities to ensure enforcement of ICs.

Notes (Cont'd)...

Informational Devices – Notice of land use restrictions (sometimes referred to as a deed notice) may be placed in land records by the owner of the subject property. Also, some states provide for notices to be placed in a statewide registry. Such notices are usually not enforceable long-term proprietary controls, but have informational value for persons searching the appropriate records. Generally, unless statutory authority exists, a governmental body should not place a notice of land use restrictions in the land records without the owner's consent, as such action may give rise to a takings claim.

\* Fences that restrict access to sites are often mistaken as ICs. Because fences are physical barriers instead of administrative or legal measures, they are not considered to be ICs.

\* "Deed restriction" is not a traditional property law term, but rather is used in the NCP as a shorthand way to refer to types of ICs. To avoid confusion, site managers should avoid the term and instead be specific about the types of ICs under consideration and their objectives.

## Important Role of Institutional Controls

- Inevitable part of many waste-in-place remedies
- May also be needed until final, unrestricted release conditions are in place
- However, not a substitute for active measures (e.g., to address principal threat wastes)
- Should work in combination with treatment and engineering approaches

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### Notes:

- Whenever wastes remain in place as part of a remedy in concentrations above a restricted resource use, some form of ICs are likely to be needed to complement other controls. That is, ICs should be used at all sites where contamination is left in place as part of a final remedy that does not allow for unrestricted use and unlimited exposure. ICs are compared to the most restrictive criteria (residential)—not present or future use.
- Even when unrestricted resource use is planned, ICs may be part of an interim approach until the desired conditions are achieved.
- EPA expects active measures often to be needed. For example, EPA expects treatment of principal threat wastes and ICs would not be an appropriate control for these wastes.

## Thinking About ICs in Corrective Action

- Mix of institutional controls may be needed to meet the desired objectives (“layering” is the commonly used term)
- ICs vary temporally, geographically, and by the type of action being taken (interim, final)
- Implementation of ICs may differ between RCRA and CERCLA

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Notes:

### Examples of ICs available to use in RCRA Corrective Action:

- Restricting groundwater use by stopping use of a municipal well field until MCLs have been met
- Creating an easement or permit program to prohibit well-drilling on the property
- Prohibiting residential development in an area of contamination through use of a zoning restriction

Institutional controls may be part of both for short and long-term periods, be applied to a portion or an entire site, and be part of interim or final actions. All aspects of these choices should be thought through in line with the approach outlined in this presentation

### What is Allowable Under RCRA

-Under RCRA the permitting authority can itself be used as an IC. Prohibitions on certain land uses or activities can be made a condition of the permit. But care should be taken to ensure that the ICs will survive property transfer and/or permit termination.

-Because there is no federal mechanism allowing the Agency to acquire an interest in property to implement an IC under RCRA, EPA must rely on third parties (typically, the relevant state or local government) to exercise its authority to hold the property interest. Because the third parties will hold the interest, they will be able to enforce the IC.

## Thinking About ICs in Corrective Action (Cont'd)...

- You should start considering ICs as soon as you think about any remedial options that would leave waste in place greater than an acceptable, conservative, direct exposure level (i.e., residential)
- ICs are actions (they don't actively clean up waste, but they do control exposure)
  - Subject to same criteria used to evaluate engineering controls

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### Notes:

The need for institutional controls may be anticipated as early as facility investigations when problems are defined and initial evaluations of technologies are initiated. At this time, the focus should be on identifying any information that will be necessary to determine what controls may be appropriate and key data needed to support their selection.

As evaluation of technologies proceeds, institutional controls should be similarly considered. If a corrective measures study (or equivalent document) is prepared, institutional controls should be evaluated similar to engineering options.

The Statement of Basis must clearly outline the purpose of the IC and identify expected standards of performance.

The basis for evaluating institutional controls as part of a remedy is the same performance standard and balancing/evaluation criteria used for other types of final remedies. These are outlined in more detail in the Quick Reference Tables and the next module, Remedy Selection.



## Common Myths About ICs

- 1) The lawyers can deal with ICs later
- 2) Don't sweat the cleanup standards; ICs can always address residual contamination
- 3) The project manager promised to implement ICs later; that's good enough for now
- 4) I'll just use a model IC; after all, if it works at a site in one State, it should work at another

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### Notes:

1) Wrong – Just like engineering controls, ICs need to be carefully designed, constructed and implemented. Early consideration of these details is critical. Remember, Agency attorneys don't charge by the hour; call them early in the process!

2) Wrong – While there is a time and a place for ICs, they are not a catch-all that can be relied upon to address all concerns about long-term exposure pathways.

3) Wrong – Many project managers do not realize that there must be two parties (and EPA does not count) to create an effective, enforceable IC (other than informational notices). To create a valid real property interest, there must be a conveyance by one property owner (grantor) to another entity (the grantee). The conveyance results in the property owner agreeing to do or refrain from doing specific activities and granting a right of enforcement to the grantee. Unlike Superfund, EPA cannot purchase the property interest. So even the project manager's good faith pledge is useless without the cooperation of an appropriate third party.

4) Wrong – The terminology, enforceability and effect of each real property interest is largely dependent on state common law of real property. For example, in most states, in order for an easement to bind subsequent purchasers, the grantor and grantee must be adjacent property owners (with one parcel getting the benefit of the easement and the other the burdens). This may have negative implications for restrictions placed on property for protection of public health and the environment since the grantee is not typically an adjacent property owner.

## ICs Should Resemble Engineering Controls in the Way They Are Considered

Like engineering controls, institutional controls involve:



### Engineering Controls

- Evaluate feasibility
- Conduct design
- Evaluate interaction with other parts of remedy
- Build/test
- Make visible/enforceable
- Monitor, adjust, ensure effectiveness for appropriate time frame

### Institutional Controls

[Same considerations apply]

- Draft/establish/test
- Make visible/enforceable

[Same considerations apply]



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Notes:

Design Phase – Involves evaluating the need for and appropriateness of an institutional control, determining the type of control needed, and identifying the third parties necessary to successfully implement IC.

Construction Phase – Involves negotiating, drafting, and recording legal documents to transfer property interest from property owner to third party (i.e., creating industrial use only easement held by the state environmental agency).

O & M Phase – Involves implementing visibility measures to ensure that the community is informed about the IC (i.e., recording with Dig Safe, adding to state web page, etc.) and inspecting and enforcing IC.

Like engineering controls, ICs can work well, work somewhat, or not work.

## Elements When Developing ICs

- ICs often may need to be “layered” (i.e., more than one type of IC used simultaneously) or used in a series depending on site-specific conditions
- To evaluate use of ICs, the project manager should look at four elements:
  - Objective of the IC
  - Mechanism(s) available
  - Timing (when and for how long IC is needed)
  - Responsibility (who will make it work)



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Notes:

Objective—Clearly state the goals and what will be accomplished through the use of ICs.

Example: Restrict the use of ground water as a drinking water source until the MCLs are met.

Mechanism—Determine the specific types of ICs required to meet the objective (i.e., access is often a contractual right whereas land use restrictions are a property right).

Example: Choose several types such as an easement, a zoning change and a deed notice to simultaneously restrict land use and provide notification on the limitation of a site for a specific use (“layering”).

Timing—Investigate when the IC needs to be implemented and/or secured.

Example: A deed notice may be required in the short-term and a formal petition for a zoning change may be necessary in the long-term.

Responsibility—Think about who will be responsible for securing and maintaining the control.

Example: Compel the potentially responsible party to ensure appropriate land use on their site through an enforceable agreement in addition to relying on local policing of zoning requirements.

Notes:

Some Rules of Thumb About Proprietary Controls

- 1) Is a property right (as opposed to a mere contractual right) really necessary  
Generally, proprietary controls are advisable when the restrictions will be:
  - a) Long-term (15-30 years)
  - b) Permanent (contaminants will be let in place that prevent unrestricted use),  
OR
  - c) Other controls are deemed unreliableIf duration is more short-term (4-5 years to treat soil), restrictions may not need to “run with the land.”
- 2) When should property restrictions be implemented/secured?  
Timing should be evaluated as part of the remedy selection process
- 3) Who will be responsible for securing and maintaining the controls?
  - a) Party responsible for the cleanup at the site
  - b) Other parties such as federal, state, or local government, if appropriate
- 4) Who should be the grantee?  
Unlike CERCLA, RCRA does not authorize EPA to hold property interests. Thus, EPA should look towards other potential grantees such as states, stable companies (Fortune 500), local government organizations, conservation organizations, etc.
- 5) How should potential holder be evaluated?
  - a) Is entity likely to be in existence for the duration of the remedy?
  - b) Would entity be willing and/or capable of enforcing?

## Uncertainty Management in Institutional Controls

- Like engineering or treatment approaches, ICs will result in uncertainties that need to be managed
- In many cases, the effectiveness of the control and issues about responsibility and enforceability will be long-term uncertainties
- In general, any IC will require active uncertainty management (continuous monitoring)

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Notes:

- Layering of controls is an uncertainty management strategy.
- Controls can be established early in the process and revised later to become more or less restrictive as data are collected and risks to human health and the environment are better understood

## Summary Slide

- ICs will be a part of many RCRA interim and final remedies
- ICs should be evaluated in terms similar to those of engineering controls (effective design, good operation, long-term monitoring)

